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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,203	10/10/2003	Marcel Stalder	61277-005	1265

25243 7590 12/01/2004

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WASHINGTON, DC 20007

EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT PAPER NUMBER

3749

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER
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ART UNIT	PAPER
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20041122

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

<b>Office Action Summary</b>	<b>Application No.</b> 10/682,203	<b>Applicant(s)</b> STALDER ET AL.	
	<b>Examiner</b> Stephen Gravini	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 17-26, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 13, 15-16, 27-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20031010</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
It does not identify the citizenship of each inventor (specifically the second named inventor).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,6-9, 12, 14, 17, and 21-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Snyder et al. (US 6,176,087). Snyder is considered to disclose the claimed invention comprising:

inlet openings **36** for a combustion air stream, at least a swirl generator **60 & 72** for the combustion air stream, and one or more first fuel supplies with first fuel outlet openings for injection of fuel into the combustion air stream; and

at least one resonance tube **80** or **82** with one open end and one essentially closed end arranged in or at the burner, the closed end being positioned in a region of a flame front which forms during operation of the burner on a side of the burner, the open end disposed proximate an outlet opening of a supply for a compressible medium; or alternatively:

operation of a burner for improved stabilization of a flame, in which the flame is stabilized by an at least one resonance tube with an open end and an essentially closed end, with the closed end being arranged in a region of a flame front forming on a side of the burner, and being pressurized by means of a compressible medium from the open end at least during the occurrence of flame pulsations continuously such that the compressible medium periodically enters and leaves the at least one resonance tube through the open end, wherein the closed end of the resonance tube is heated (please<sup>see</sup> see column 5 line 23 through column 6 line 64). Snyder is also considered to disclose the claimed central axis burner resonance tube arrangement **50**, central burner lance **42**, cone-shaped or conical resonance tube **82**, nozzle **84**, compressed air supply (column 4 line 67 where gaseous fluid implicitly anticipates the claimed compressed air supply because both can be supplied by compression), resonance tube disposal on a central burner axis, with the open end of the resonance tube being connected to at least one supply channel through which fuel leaving the open end is injectable into the flame (column 4 lines 62-67), at least one resonance tube also is used for igniting the burner, the at least one resonance tube being pressurized with the compressible medium from the open end such that the closed end is heated to an ignition temperature (column 4

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line 67), and fuel leaving again from the open end of the at least one resonance tube is injected into the flame proximate the closed end of the at least one resonance tube, wherein a small portion of fuel injected into the at least one resonance tube is injected into the flame through an opening at the closed end (column 7 lines 1-17).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-5 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder. Snyder is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed plurality of resonance tubes and decreasing interior diameter. It would have been an obvious matter of design choice to combine the teachings of Snyder with a plurality of resonance tubes and decreasing interior diameter, since those features are not considered to patentably distinguish the claimed invention over the resonance tubes and diameters found in the

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prior art, since the invention can be performed by Snyder as claimed with a single resonance tube or any diameter configuration.

Claims 18-20 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder in view of Schreter (US 3,819,319). Snyder is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed pilot fuel pressure reservoir and control gage. Schreter, another burner device and method, teaches a pilot fuel pressure reservoir and control gage at column 19 lines 42-65. It would have been obvious to one skilled in the art to combine the teachings of Snyder with the pilot fuel pressure reservoir and control gage considered disclosed by Schreter for the purpose of maintaining constant pressure of combustion fluid.

***Allowable Subject Matter***

Claims 13, 15-16, and 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272 4875. The examiner can normally be reached on normal weekday business hours (east coast time).

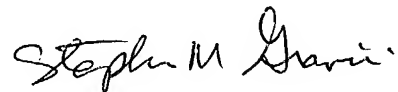
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus can be reached on 571 272 4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Smg

November 22, 2004

A handwritten signature in cursive script, reading "Stephen M. Davis".